Amendment to the Claims

1-28. Cancelled.

29. A heating apparatus comprising:

a heater coil for inductive heating; and

a power source for supplying to the heater coil non-sinusoidal current pulses having steeply varying portions providing high frequency harmonics in the heater coil, wherein the heater coil generates a magnetic flux for inductive heating of an article.

30. The apparatus of claim 29, wherein the heater coil is inductively coupled to a load which includes the article.

31. The apparatus of claim 30, wherein the load includes a closed loop for the magnetic flux.

32. The apparatus of claim 31, wherein the load includes a core and a yoke which form the closed loop.

33. The apparatus of claim 30, wherein the load includes a core and a yoke and the heater coil is disposed between or embedded within at least one of the core and yoke.

34. The apparatus of claim 30, wherein the load includes a core having a passageway for a flowable material.

35. The apparatus of claim 34, wherein the core heats the flowable material.

36. The apparatus of claim 34, wherein the heater coil is positioned in the core so that heating is concentrated in the passageway.

37. The article of claim 29, wherein the article forms at least part of a closed loop for the magnetic flux.

38. The article of claim 30, wherein a portion of the load has discontinuities or restrictions to a flow of eddy currents for concentrating inductive heating in another portion of the load.

39. The apparatus of claim 29, wherein the power source includes a low or line frequency current source.

40. The apparatus of claim 29, wherein the power source is variable for adjusting the energy content of the current pulses supplied to the heater coil.

41. The apparatus of claim 29, wherein the heater coil is inductively coupled to a load which includes a core, and the heater coil is at least partially embedded in the core.

42. The apparatus of claim 29, wherein the heater coil is wrapped around the article.

43. The article of claim 29, wherein the heater coil is mounted on the surface of the article.

44. A method of supplying current to a heater coil of a heating apparatus for inductive heating, the method comprising: supplying to the heater coil non-sinusoidal current pulses having steeply varying portions providing high frequency harmonics in the heater coil, wherein the heater coil generates a magnetic flux for inductive heating of an article.